

REMARKS

This Amendment is in response to the Official Action of June 9, 2003.

In the Official Action, Claims 51-54 were rejected and the action was final. All claims except Claims 1, 2, 43 and 44 were cancelled without prejudice upon the filing of the Application. Subsequently Claims 1, 2, 43 and 44 were cancelled without prejudice in response to the Official Action of June 9, 2003 and Claims 51-54 were added. In this Amendment, Claims 51-54 are cancelled without prejudice whereby all previous Claims, 1-54, have been cancelled without prejudice.

The dairy industry has been marked by many important inventions. For example, the advent of the railroad permitted dairy farms to move farther from the cities that they served instead of the necessity of being in or closely adjacent such cities. Pasteurization enabled the milk to remain wholesome longer, and less apt to cause sickness or disease. The successful advent of the milking machine (after many failures) vastly increased the productivity of dairy farms, whereby the herds did not have to be hand milked one cow at a time, thus reducing the amount of manpower required for milking tremendously. The introduction of the refrigerated bulk milk tank eliminated the need for milk cans to be picked up daily by milk trucks and then returned to the dairy farmers whereby now about every day or every other day refrigerated milk is pumped from a bulk milk tank which has received the milk directly from cows into a milk tank truck which carries the milk in its refrigerated state to the dairy for further processing. Nevertheless, until recently the dairy cattle were milked at least twice a day and in some cases three times a day, seven days a week. Although the cows were not milked by hand, still the placement of the teat cups on the cows' teats was a manual operation. It was said that one could always tell who were the dairy farmers at the church picnic because they were the ones that had

to leave around 3:00pm or 3:30pm to be home in time to milk the cows. They also had to rise in the morning at about 3:00am or 3:30am seven days a week to milk the cows.

More recently automated milking systems are being introduced where, at least in theory, a dairy farm almost runs itself without the need for human labor. Of course this is currently an exaggeration. Nevertheless, another giant step for the advance of dairy farming is taking place.

The cows in dairy herds each have their own personality, likes and dislikes and a system of hierarchy, one of the cows being the alpha cow and so forth. Also some cows tend to be much more active in jostling other cows with there being a gradation of the jostlers in the herd down to the cow doing the least jostling. Yet further, some of the cows in the herd are known as "gourmets" in that they will go from one feeding trough to another consuming only a little in each that is most appealing to them. It is to the advantage of the dairy farmers to know their cattle well and most do. However, with automated milking, the use of milking machines which are manually connected to the cows' teats is the exception and milking by hand is the exception to the exception. Thus the dairy farmers' contacts with the dairy cattle are greatly reduced, albeit, that said, most dairy farmers remain quite knowledgeable concerning the individual behaviors and personalities of their cows. But this is becoming increasingly difficult and almost impossible when herds number 1,000 and more. Yet, knowing your cattle remains an important aspect of animal husbandry for dairy farmers.

The present invention, while utilizing as much as it can the knowledge that the farmers have concerning their herds and the individual animals in them, is directed to mechanisms for assisting the determination of the hierarchy, jostling behavior and gourmet behavior of the individual animals, and utilizing this information to improve management of the herd and to instill a certain herd discipline.

For the purposes of rejection of the prior claims under 35 U.S.C. §102, the Patent Examiner cited for the first time U.S. Patent No. 6,427,627 B1, of Huisma, which issued August 6, 2002. Although the claims submitted in response to the first Official Action were essentially re-writes of the prior claims to place them in formats more customary for U.S. patent applications, the Official Action was made final.

In the Official Action it was stated that the Huisma reference discloses the claimed invention of an arrangement for managing a herd of domesticated animals that includes animal identification means provided with a central unit, a computer having a memory, the memory containing data for each animal of the herd relating to the status of each animal in the hierarchy order of the herd. Attention was invited to column 6, line 12, wherein it was set forth that the computer 14 typically monitors one or more desired animal behaviors which can effect or be used to predict desired feeding, drinking and other behaviors of the animals. This enables bossy animals which are disruptive to feeding of other animals to be quickly identified and removed at an early stage to minimize the disruption of the animals. Monitoring which animals feed first helps identify the animal hierarchy and the eagerness of the monitored animals to feed.

The reference further points out that the herd hierarchy influences the feed intake rate of the animals. To exploit this feature, the feeding or drinking trough 28 is typically designed to be slightly smaller than the required size so that not all of the animals 26 can feed or drink at the feeding or drinking trough 28 at the same time. This insufficient feeding or drinking space or both instills competitive feeding and drinking behavior in the animals. After a few days of monitoring animals 26, it can be readily determined which animals are pushed animals by which other animals while feeding or drinking (see column 7, lines 30-39).

Although not specifically stated, it appears that Huisma desires to fatten up the animals as soon as possible. The feeding trough 28, assuming that it is sixteen feet long, as stated in the

reference, can be divided into four sections each four feet long (see column 10, lines 11-13). Clearly this is not intended for dairy use wherein the feeding troughs are divided and less than four feet wide -- perhaps two or two and one-half feet in most cases or less.

It will be noted that prior Claims 51 and 52 correspond generally to new Claims 55 and 56 except that Claim 55, in particular, is more specific in stating that each feed trough can only receive one animal at a time. It is also provided that each trough has closure means for selectively precluding an animal from consuming feed therefrom. The Huisma reference leads away from feed troughs designed for only one animal at a time and fails to include closure means which were utilized by the instant inventors as an important aspect of their invention.

Method Claims 53 and 54 of the instant Application have been replaced, in effect, by new Claims 96 and 97 to include the method of comprising the step of determining the statuses of each animal in the herd as to its hierarchy order and as to its jostling behavior.

Further, new Claim 104 adds the determination of the gourmet behavior of the animals which is not taught at all by the Huisma reference.

It is submitted that the dependent claims are patentably distinct from the claims in which they depend, from each other and they are also individually distinctive from the prior art of record.

Incidentally, the claims as submitted herewith generally re-introduce the dependent claims which were filed with the original Application. In any event, it is manifestly apparent that the claims as presented in this Amendment clearly avoid the references of record and are, accordingly, allowable under 35 U.S.C. §§102 and 103.

In reintroducing, in general, the dependent claims which were set forth in the original Application as filed, the Application now presents a total of fifty (50) claims, of which three (3) of the claims are independent claims. Accordingly, it appears that a further fee of \$750.00 is

required for the claims currently presented and this amount is covered by our check which is filed together with this Amendment. However, if in error, the Commissioner of Patents is authorized to debit or credit our Account No. 13-2000 as appropriate.

It is submitted that the instant invention is new and useful. It has been derived through the use of intellect and ingenuity which rises above the level requisite for a patent under the patent statutes of the United States. Manifestly the invention meets those conditions for patentability prescribed by 35 U.S.C. §102 and, it is submitted, the differences between the subject matter sought to be patented and prior art cited and within the expert knowledge of the Examiner are insufficient to render the subject matter of the invention as a whole obvious on its effective date to persons having ordinary skill in the art to which the subject matter of this invention pertains.

In view of the foregoing, the allowance of claims as now presented is earnestly solicited.

Respectfully submitted,

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